

SAUDI COUNCIL
FOR
HEALTH SPECIALTIES



SAUDI BOARD IN
ORTHODONTICS
“SBO”

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I. INTRODUCTION

The Saudi Board of Orthodontics specialty program approved by the Saudi Health Council is a 5-year program that offers clinical experience in the field of Orthodontics. Candidates whom are accepted into this program will undergo intensive orthodontic clinical training, orthodontic literature review, and basic science.

II. OBJECTIVES

The ultimate goal of the Saudi Board of Orthodontics is to graduate individuals with the capability of assuming their role as competent clinicians in the field of orthodontics. The SBO program prepares the residents to:

- Plan and provide simple and complex Orthodontic care for a wide variety of patients applying advanced knowledge and clinical skills.
- Acquire competence and confidence in clinical disciplinary care of patients.
- Reinforce the ability the make judgments in arriving of diagnosis, treatment planning, and assessment of treatment outcomes.
- Keep abreast with the modern technology in dentistry and practice management.
- Communicate, understand and function effectively with other health care professionals and understand the setting of their organizational system.
- Acquire experience in teaching and research to upgrade the clinical knowledge.

III. EDUCATIONAL SPONSORSHIP AND SETTING

The sponsor of the Saudi Board of Orthodontics is an institution, which has an overall administrative control and responsibility for conducting the program. Government or a private training center can be accepted for training after being accredited by the Saudi Council for Health Specialists (SCHS) as either a full training center or partial training center. A committee according to the standard classification carries out the recognition procedure and rules set by the SCHS as follows:

- A training center must provide a readily accessible facility for dental treatment of all patients.
- The training center must provide resources sufficient for resident training.
- If a full or partial training center lacks adequate facilities, patient caseloads, or any other resources needed by the educational program, it must supplement its

resources through affiliations with other institutions. Affiliated hospitals or dental departments or centers which residents receive a substantial portion of their training must be accredited by the SCHS.

- Residents must be appointed to the house staff of the qualified and accredited staff of training center and must have equal privileges and responsibilities as residents in other educational programs.

IV. ADMISSION REQUIRMENTS

Dentists with the following qualifications are eligible for the SBO:

- A Bachelor of Dental Surgery Degree (BDS) from King Saud University or equivalent from a recognized university.
- Successful completion of rotating internship year in general dentistry (12 months).
- Applicant has passed the competitive selection examination process.
- Provision of at least two recommendation letters from consultants as to the suitability of the applicant for training in postgraduate Orthodontic program.
- Letter from sponsor approving that the applicant can be in full time training for the entire duration of the program (5 years).
- Applicant is registered in the SCHS as a trainee.
- Applicant must pay the application fees and training fees.
- Signed obligation to abide by the rules and regulations of the training program and the SBO.

V.CURRICULM

The SBO is a program extends for a period of five years in which the didactic clinical sciences and advanced clinical training are integrated into the program duration. Documentation of the program progress and all resident activities must be maintained by the program director and available for review. The following is a list of the recommended courses and their respective years to be taken in:

A) Recommended Basic Science Courses:

Basic Science Courses Recommended for the First Year Residents (R1):

1) Advanced Oral Biology (R1):

The lectures cover the development of the face, microanatomy of the bone and

hard dental tissues, oral mucous membrane, periodontium and salivary glands. In addition, lectures cover various oral and dental structures, their functions, relationship and response to systemic and environmental influences.

2) Applied Head and Neck Anatomy (R1)

Topics reviewed highlight salient anatomical structures of the head and neck as applied to dentistry to reflect significant clinical considerations. Topics covered include but are not limited; facial skeleton, muscles of the face and mastication, the mouth, or pharynx and nerve supply of the oral cavity and of the salivary glands.

3) Embryology (R1):

The course offers an in-depth study of the embryo genesis of tissues, organs and structures of the craniofacial region.

4) Oral Pathology (R1):

This course deals with the pathology of the jaws and contiguous soft tissues and their relationship to systemic disease.

Basic Science Courses Recommended for the Second Year Residents (R2):

1) Genetics (R2):

Molecular biology of genes, cytogenesis, mechanisms of inheritance, of malocclusion, dental anomalies, craniofacial syndromes and medical genetics will be taught in this course.

2) Biostatistics in Dentistry (R2):

Topics covered include variables, frequency distribution, sampling measure of central tendency, variance and measures of dispersion, various statistical tests, analysis and probability.

3) Craniofacial Development and Growth (Re):

The course provides the residents knowledge regarding definition, developmental periods and growth in height, standards of growth and development, method for study of craniofacial growth. Prenatal development of hard and soft tissues, development of clefts lip and palate, skeletal morphogenesis and growth principles, growth of the craniofacial complex including growth of soft tissue, control mechanisms in craniofacial growth, prediction of growth.

4) Dental Biomaterials (R2):

The topics and seminars in this course will provide the resident with the knowledge necessary to properly select and manipulate various dental material systems used in relation to orthodontics.

Basic Science Courses Recommended for the Third Year Residents (R3):

1) microbiology, Immunology & Infection Control (R3):

This didactic course covers topics in microbiology and immunology which explain oral pathological conditions including bacterial, viral and mycotic infections of the oral cavity.

2) Adv. Topics in Oral Medicine/Diagnosis (R3):

The student will be provided with an integrated and comprehensive understanding of oral diseases and their management.

3) Occlusion (Craniomandibular Dysfunction) (R3):

Topics on stomatiognathic physiology and craniomandibular dysfunctions are adequately covered in this course.

4) Advanced Oral & maxillofacial Radiology (R3):

The course provides the residents knowledge of radiation physics, radiation biology, hazard and protection, advanced imaging techniques and diagnostic oral radiology.

Basic Science Rourses Recommended for the Fourth Year Residents (R4):

1) Child Psychology (r4):

Psychological development from infancy through early adulthood will be described with greater emphasis placed on application of this information to clinical health care delivery services.

2) Research methods & scientific Writing (R4):

Emphasis will be made on and the various methods of research design, in addition to the ethical aspects of research on animals and humans. The resident shall learn to write a protocol for a research project, interpret own research findings, and present research findings in oral and written form.

3) Education Methods (R4):

The aim of this course is to expose all residents, regardless of their future professional expectations, to the methods of teaching and learning. Topics include the nature of learning and teaching, curriculum development, instructional objectives, instructional media, audio-visual teaching and learning aids and assessment methods for knowledge, skills and attitude.

Basic Science Courses Recommended for the Fifth year Residents(R5):

1) General Epidemiology (R5):

Principles and methods in the study of the distribution and determinants of diseases in human populations are given. Topics covered will include: agent, host and environment, statistical measures used in epidemiology, methods for organizing epidemiological data, disease surveillance and investigations of disease outbreaks.

2) Practice Management (R5):

The following will be covered: Management of auxiliaries and other office personnel, maintenance and management of patient records, quality assessment and quality assurance, principles of peer review business management including an understanding of third party payment and professional practice development, infection control, environmental health management, principles of professional ethics, and alternative health care delivery systems.

B. Orthodontic Seminars:

Orthodontic seminars will be held for the resident with the senior staff member, throughout the five years of the program. During their training, seminars will focus on the basics of orthodontics through a revision of various textbooks. The resident will learn about about the following:

- Development of the dentition.
- Facial growth and development.
- Biology of tooth movement.
- Etiology of malocclusion.
- Classification of malocclusion.
- Cephalometrics including the use of imaging system.
- Diagnostic procedures.
- Orthodontic assessment.
- Treatment objectives.

- Treatment objectives.
- Treatment mechanics.
- Dent facial orthopedics and growth guidance.
- Growth and treatment analysis.
- Orthodontic materials.
- Biomechanics of treatment and appliances.
- Growth and treatment analysis.
- Orthodontic materials.
- Biomechanics of treatment and appliances.
- Specific treatment procedures and multidisciplinary treatment.
- Orthographic surgery.
- Temporomandibular Dysfunction & Myofascia Pain.
- Cleft lip and plate cases.
- Adult orthodontic.

Finally, the residents will also be given seminars on more advanced cases of orthodontic problems such as management of Dentofacial abnormalities and distraction ontogenesis. In addition, they will review the most recent literature from various journals. The resident at this stage should be able to discuss and understand the basics of orthodontics, diagnosis and treatment planning of orthodontic patients, the approach and management of these and difficult cases, and should have an insight at the progress and future of orthodontics.

C. Orthodontic Clinic:

Orthodontic clinical training is spread over all the five years of the program. It is designed to train the residents in clinical diagnostic procedure of orthodontics, which includes collection and analysis of data base, list of problems, solution of each of the problems according to priority order, objectives of treatment and treatment mechanics.

Upon entry into the program, the residents will dedicate their time to preliminary clinical work, such as wire bending and construction of appliances in the laboratory. After which, they will be trained to take history, impressions, trim and polish study models, intra and extra-oral photographs, intra and extra-oral radiographs including cephalometric and hand-wrist radiographs for the evaluation of the skeletal components of the head and assessment of physical maturation status. Each case will be worked up by the head and assessment of physical maturation status. Each case will be worked up by the resident and his/her corresponding supervisor, and presented thereafter to their colleagues and supervisors.

A variety of cases of offered to the resident that ranges from early interceptive orthodontic treatment to treatment of adults through fixed orthodontic appliances. Focus is on the edgewise mechanics and straight wire technique, but the use of functional appliances and removable appliances is also included. Incorporating subspecialty cases such as TMJ patients, orthographic surgery cases, and cleft lip and palate patients further broadens clinical experience for the residents. They are also encouraged to handle compromised cases, which deal with restorative, aerodontics or prosthetic problems.

The resident will provide orthodontic treatment for number of patients under the guidance and supervision of different instructors. Each resident is assigned approximately 45-50 new patients to be treated and completed within the patients to be treated and completed within the five years of clinical training, in addition to the transfer cases (due to patient's attrition, resident is advised to start 70 new patients). They will be given a variety of malocclusion cases requiring the following modalities of treatment:

Type of Case	Mo. Of Patients
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1) Early treatment malocclusion: either a one or two stage treatment started in the primary of mixed dentition and completed in the permanent dentition.	10-12
2) Adult malocclusion: and adult whose malocclusion requires coordination among other specialties such as periodontics, restorative or prosthodontics.	5-6
3) Class I malocclusion treated with extraction of permanent teeth.	8-10
4) Class I malocclusion treated non-extraction.	3-4
5) Class II malocclusion treated with extraction of permanent teeth.	6-4
6) Class III malocclusion treated non-surgically.	3-4
7) Transverse discrepancy: A posterior crossbite that requires complete appliance treatment.	2-3
8) Dentofacial deformity cases with combined management of orthodontic and orthographic a approach: anteroposterior and/or vertical skeletal discrepancy.	3-4
9) Cleft lip and palate:	2-3

The residents should formulate the diagnosis and treatment plan form every patient under their care. This is done along with their corresponding instructor and presented to their colleagues for further discussion. Patient's records and documentation should be kept in a binder including the following:

- a) Cephalometric radiographs.
- b) Hand-wrist radiograph (if required by instructor).
- c) Panormaic radiographs.
- d) Bitewings and preapical for upper and lower anterior

teeth.

- e) Slides; 5 extra-oral photographs (profile, en face, en face with smile, oblique, en face with smile). 5 Intra-oral photographs (frontal, right lateral and left lateral, upper/lower occlusal views) and slides showing different treatment stages and case progress.
- f) Any other required by cases or instructor.

In addition, the following information should be typewritten:

- Patients name, age and other personal history.
- General history.
- Clinical examination; extra-oral and intra-oral.
- Model analysis, including Bolton's analysis.
- Radiological evaluation including: extra-oral and intra-oral with cephalometric tracings.
- Diagnosis, with the possible etiological factors.
- Treatment plan which includes the need for extractions, amount of tooth movement, anchorage, appliances, treatment time and prognosis.
- Summary of the above with the corresponding supervisor's signature.

During the residents training, a logbook of their clinical activities will be provided for each resident in order to monitor patient care and treatment. In addition, they are also required to conduct a small research project during their clinical program. They are also encouraged to visit other reputable centers abroad such as in the US or Europe, for observation and case presentation seminars and attend national and international conferences.

VI. EVALUATION

According to the rules and regulations of the Saudi Health Council, the following evaluations should be carried out:

Yearly Evaluation:

Formal Evaluation towards the end of each year will be conducted for the resident during their residency program (end year examination). This is to determine

whether they are meeting the qualitative and quantitative requirements and standards of the program and can be promoted to the following year.

Part. Examination:

Written Examination is conducted towards the end of the first year of the program. This examination includes material from the following basic science courses: Head and Neck Anatomy, Embryology, Oral Biology and Oral Pathology.

Part II. Examination:

This examination is conducted toward the end of the fifth year. It includes the followings:

A) Didactic Evaluation:

A comprehensive written examination on various orthodontic subjects.

B) Clinical Evaluation:

1. Resident should provide evidence of completing the treatment of a minimum of 45 cases from start to finish during his/her training period.
2. Residents are required to submit 10 completed cases of different malocclusion to the examination committee. These cases should include one of each of the following:
 - Early treatment malocclusion.
 - Adult malocclusion.
 - Class I malocclusion treated with extraction of permanent teeth.
 - Class I malocclusion treated non-extraction.
 - Class II malocclusion treated with extraction of permanent teeth.
 - Class II malocclusion treated non-extraction of permanent teeth.
 - Class III malocclusion treated non-surgically.
 - Transverse discrepancy.
 - A case of a combined orthodontic and orthographic treatment approach.
 - Cleft lip and palate (single treatment phase or more).

The resident should follow the previous guidelines in preparing the patient's binder when submitting his/her cases. The resident will be examined and evaluated accordingly.

D. Oral Examination:

Resident will be provided with a complete records of an orthodontic case to be examined accordingly on the diagnosis and treatment plan for that specific malocclusal problem. The resident will also be examined extensively on the different aspects of orthodontics oral examination.

Program Evaluation:

The scientific committee must regularly evaluate the degree to which the program goals are being met.

VII. CERTIFICATION

The successful candidate will be conferred a Certificate on the Saudi Board of Orthodontics upon completion of all the academic and clinical requirements as well as the final board examination.

**MEFHOD FOR CONDUCTING THE
VARIOUS ACTIVITES OF SAUDI BOARD
OF ORTHODONTICS**

I) Pre- Clinical Orthodontic Preparation Course:

The course is to cover 4 months from the time the residents are admitted to the program. It is designed to give the candidates an extensive wire bending exercises, placement of various componenets of fixed orthodontic appliance, series of orthodontic lectures to cover the various topics in orthodontic specialty (as an introduction) and preparation of patient's binder which includes analysis of various patient's records and training on orthodontic laboratory work.

II) Basic Science Course:

Basic Science Courses will be given in the from of crush courses during mainly Wednesday and Thursdays as courses are pre-planned for each year of residency. The amount of contact hours assigned for each course will depend on the importance and relevance of any given subject to the main specialty (orthodontics). Residents will be provided a list of important textbooks for each subject.

III) Orthodontic Specialty Courses and Seminar:

Orthodontic Specialty Course will be given in the form of crush courses

likewise the Basic Science Courses. In addition, each resident will be given two topics in orthodontic specialty to prepare and present in the form of lecture each year. Orthodontic Seminar is conducted one session per week in which orthodontic books and articles in the different topics in orthodontic specialty are reviewed. Residents will be provided with the list of recommended textbooks and key articles in the field.

IV. Clinical Activities:

On average, each residents will be allocated 70 new orthodontic patients representing a variety types of malocclusion. The resident will provide the treatment under supervision and guidance of different instructors. Each resident is requested to prepare a binder for every patient which should include all necessary patient records and documents as requested in the program outline. All patients binders should be signed by the assigned supervisors to approve the final binder preparation and treatment planning before patient treatment is carried out. Case presentation session will be held on a monthly basis for the residents to present their cases from start until any reached treatment stage. This session will be arranged on a rotational basis between the different training centers in the same city, in attendance of all Saudi Board Orthodontic clinical supervisors.